## Out of Hours 20 years of GPnotebook:

from a medical student project to a national resource

GPnotebook (www.gpnotebook.co.uk) is a computerised reference resource that has been developed over more than two decades. It is a database that now contains over 2 million words of clinical information and over 27 000 index terms.

### WHAT ARE THE ORIGINS OF GPNOTEBOOK?

The original idea for the database began in the canteen of John Radcliffe Hospital in 1990 while James McMorran, a first year Oxford University clinical student, was writing up his medical notes. Instead of writing notes in longhand he wrote his notes in 'mind maps' of packets of information linking different concepts and conditions in a two-dimensional representation of clinical knowledge. James discussed with Stewart McMorran (then a medical student at Cambridge University and a talented computer programmer) this way of representing medical knowledge and between them they created the authoring software to produce linking 'packets' of information in a database. This first authoring software and database was the origin of what today is GPnotebook. It was, in effect, a 'Wiki' over 16 years before the first 'Wiki'!

Initially James used the authoring software alone to capture his own clinical learning. There was interest from other medical students at Oxford and in the end a team of six authors (mainly Oxford medical students) became the founding (and continuing) principal authors for GPnotebook. Among them was Damian Crowther who, in time, took over the role of technical lead for the site. James takes the role of editorial lead for the website. Damian developed the software for the web version of the database which was released on the worldwide web in 2001 as GPnotebook.

There were many false starts from 1991 until 2001 but the authoring team had continued to update the database as a shared resource for a group of friends. The creation of the GPnotebook website in 2001 changed the database from a shared resource for a group of like-minded medics to a resource used by thousands of doctors from the UK and all over the world each day.

### HOW IS GPNOTEBOOK NOW BEING USED?

GPnotebook is regularly used by doctors, particularly GPs in the UK. Access to

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GPnotebook is free and unrestricted to medical students (via validation of their University email address) and doctors and medical students in developing countries (validation via Facebook). During the 12 months until June 2013, 11.5 million unique users accessed pages on GPnotebook. Of those who logged into personal accounts, 30 621 users were GMC accredited clinicians working in the UK and of these, 18 719 GMC accredited doctors using the site described themselves as GPs.

There were 6.4 million pages accessed by GMC accredited clinicians during this period while they were logged in, of which 4.0 million pages were read by the GMC accredited users who described themselves as UK GPs. Many doctors take advantage of the four free pages per day and so the actual readership by UK GPs is substantially higher. Data concerning users can be derived for all and show we have a mix of two groups of users. One group visits rarely and reads a few open access pages, while the other group are predominantly UK clinicians who visit repeatedly and read more pages.

#### Table 1. Top 10 search phrases

Times searched, n
65 077
54 229
53 553
53 050
52 944
49 837
44 741
38 850
37 312
36 211
35 280
tive pulmon syndrome.

#### INFORMATION ACCESSED

GPnotebook is a very 'broad' knowledge resource with over 27 000 index terms providing access to more than 2 million words of information. Users may be considered generalists and so analysis of the terms that they enter into the search box may be considered representative of the information needs of the national clinical population.

We have recorded the content of search phrases that have been entered by users of GPnotebook. Table 1 shows the top 10 search phrases, in fact the most common search terms are single words as indicated.

A user may be searching on just the stated term or a combination term that contains the stated term: if we consider this with respect to the term 'hypertension' then there are many combination terms containing the term hypertension; for example, systemic hypertension, hypertension and stroke, hypertension and lipids, and pulmonary hypertension. In fact there are 195 different pages in GPnotebook that have hypertension in the title.

If we then consider which pages are subsequently most frequently accessed then the top four are:

- exclusion from school (guidance re: common infections), n = 61412
- migraine (main page),  $n = 34 \ 108$
- systemic hypertension (main page),
   n = 35 173
- gout (main page), *n* = 31 052

The exclusion from school guidance page has been accessed more than 60 000 times by logged in GP users of GPnotebook since the tracker facility became available in 2005.

#### CONCLUSION

Having started as a project to help a group of medical students cope with the information overload of clinical school, GPnotebook has evolved over the past 20 years to become a national, and international, resource.

# Out of Hours Poems in practice

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#### Competing interests

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Poetry is communication concentrated. A few words speak volumes. Concise communication is also a key part of general practice so why is poetry not widely recognised as a natural teaching medium in medicine?

After the arc of ECT and the blunt concussion of pills, they gave him lithium to cling to—the psychiatrist's stone.

This opening line from Robin Robertson's Lithium1 is a great example of the power of poetry to impress the patient's inner feelings on the reader. We see the jumping spark of electricity; we feel the confusion and trauma inflicted by the very medication we insist will help. We sense the desperation of the patient flailing in his sea of madness with medication his only point of stability and yet ... ? Surely that brilliant reference to lithium as the psychiatrist's stone is also intended to bring to mind the legendary philosopher's stone? That which not only turned base metal to gold but held the secret of eternal life and brought healing to the possessor. Just as that miraculous remedy was only a fantasy perhaps this 'cure' doesn't work either? Is psychiatry mere alchemy too?

So many questions arise and doors into the patient experience can open up in discussion of just a single line of a poem. Lithium artfully goes on to describe three physical properties of the metal and how each of them induces memories of the patient's previous triple failed suicides by drowning, self-immolation, and hanging. Some of lithium's properties would have prevented such attempts but some would have facilitated them. Is lithium then a therapy, a threat, or both? All of this and more is conveyed in just 33 words. You have to look carefully to perceive these double meanings though. The link to the attempted suicides is rarely seen on a first or even second reading. The experience of light gradually dawning from a seemingly random text can help us as GPs to consider

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how often we miss important links in consultations; especially with those patients we consider to be 'mad'.

It's not just poems about experience of illness that are rich sources of teaching and learning. Poems about doctors and by doctors and other healthcare professionals, poems about medical procedures, the medic's inner life and outer world, about birth, death and all the milestones in between, can feed lively and relevant discussion and learning.

A recent training afternoon with GP registrars confirmed this for me. I had originally been invited to talk about using humanities in medical training and planned to use mainly films but when both projectors failed, I was glad I had some photocopied poems as backup. I could see how the group was gripped by many of the poems and became increasingly skilled in bringing out their hidden meanings as the afternoon wore on. Our patients often bring their pains concealed in metaphor and allusion too and poetry can help us as GPs to identify and unwrap those concerns which can't be voiced directly.

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#### REFERENCE

 Seven poems. Robin Robertson. http://www. grandstreet.com/gsissues/gs62/gs62b.html (accessed 7 Jan 2014).

"Our patients often bring their pains concealed in metaphor and allusion too."